Mr. G. P. Bond stated that he had found that the horizontality of the axis of the Great Equatorial at Cambridge is subject to a regular disturbance, its position going through a succession of changes almost uniform every year. This he ascribed to the unequal action of temperature upon the two supporting pillars. The western pier rises from March to September, and is depressed during the remainder of the year. Mr. Bond exhibited a diagram, showing by a series of curves the rate of elevation and depression through different months, for the past five years. The amount of departure from a horizontal position is $\frac{1}{1000}$ of an inch in all.

Mr. Bond also said that he had been making some investigations to ascertain whether the attraction of the moon has any effect on the motion of a pendulum, and consequently upon the rate of a clock. He had found this last to be changed to the amount of $\frac{9}{1000}$ of a second daily. At the equator the moon's attraction changes the weight of a body only $\frac{1}{7000000}$ of the whole; yet this force is sufficient to produce the vast phenomena of the tides.

Four hundred and fifteenth meeting.

May 29, 1855. — ANNUAL MEETING.

The PRESIDENT in the chair.

The Treasurer presented his report for the year, which was certified by the Auditing Committee.

The Committee on the Library reported, and their report was accepted.

Professor Agassiz referred to the allusion in the Report to the Smithsonian Institution, and expressed in strong language his sense of the indebtedness of the scientific world to that Institution for its enlightened efforts to diffuse knowledge, particularly as a medium of exchange of publications. In conclusion, he moved that the thanks of the Academy be presented to the Smithsonian Institution, for its efficient agency in effecting for the Academy its exchanges with foreign

Societies and individuals. The motion was unanimously adopted.

Professor Lovering made a report in behalf of the Committee of Publication.

Francis C. Gray, Esq. called the attention of the Academy to the proposed work of Professor Agassiz on American Natural History. He made an earnest appeal in its behalf, urging gentlemen to individual effort to obtain subscribers, as in no other way could so expensive an undertaking be carried through. Six hundred subscribers, he stated, would be necessary to pay the mere cost of the work. His remarks were seconded and enforced by the President.

Mr. Francis Parkman was elected a Fellow of the Academy, in the Section of Political Economy and History.

The Corresponding Secretary announced the decease of the following members of the Academy during the past year: —

Foreign Honorary Members.

Prof. Carl Friedrich Gauss,	Göttingen.
Macedoine Melloni,	Naples.
Sir Henry de la Beche,	London.

Associate Fellows.

Prof. J. P. Norton,	New Haven.
Dr. R. M. Patterson,	Philadelphia.
Dr. N. Drake,	Cincinnati.
Prof. J. L. Kingsley,	New Haven.

Resident Fellows.

Dr. W. I. Burnett,	Boston.
Dr. Samuel Parkman,	Boston.

Dr. B. A. Gould, Jr., addressed the Academy in relation to the recent calamity which had befallen Science in the death of Gauss, and concluded by offering the following resolutions, which were seconded by Professor Lovering, and unanimously adopted: —

" Whereas this Academy has recently received intelligence of the afflictive event which has deprived it of its illustrious Foreign Member, and the world of a great master in mathematical, astronomical, and physical sciences, —

" *Resolved*, That the American Academy of Arts and Sciences would unite with other learned institutions throughout the world in expressing its sense of the immense loss sustained by Science in the death of Carl Friedrich Gauss.

" *Resolved*, That the Academy has regarded with pride and admiration the long and brilliant scientific career of the venerable 'father of sciences,' whose usefulness has been permitted to extend to the last hours of a life longer than is ordinarily permitted to mortals, although it closed with the full brilliancy of its noon.

" *Resolved*, That the Academy offers its condolence to the bereaved family of the illustrious dead."

Dr. C. T. Jackson exhibited drawings of a microscopic view of a fungus on the surface of a yellow rose.

Dr. Jackson also read the following analysis of water from the Sacramento River, California.

" 7 cubic centimetres, equal to $2\frac{1}{2}$ fluid ounces nearly, gave of solid matter 0.4 grains. This was found to consist of

Silicic Acid, ...	0.08
Soda and Chloride of Sodium, . .	0.22
Sulphate of Soda, ...	traces.
Organic matter, ...	0.10
	0.40

This water contains no salts of lime."

The election of officers was held in the usual form, and the following were chosen: —

Jacob Bigelow, ...	*President.*
Daniel Treadwell, . .	*Vice-President.*
Asa Gray, ...	*Corresponding Secretary.*
Samuel L. Abbot, . . .	*Recording Secretary.*
Edward Wigglesworth, .	*Treasurer.*
Nathaniel B. Shurtleff,	*Librarian.*

The following gentlemen were chosen Members of the Council for Nomination, viz.: —

Joseph Lovering,
J. I. Bowditch,
Benjamin A. Gould, Jr. } of Class I.

Louis Agassiz,
John B. S. Jackson,
Jeffries Wyman, } of Class II.

James Walker,
Jared Sparks,
Nathan Appleton, } of Class III.

The several Standing Committees were appointed, on nomination from the chair, as follows: —

Rumford Committee.

Eben N. Horsford, Joseph Lovering,
Daniel Treadwell, Henry L. Eustis,
Morrill Wyman.

Committee of Publication.

Joseph Lovering, Louis Agassiz, Francis Bowen.

Committee on the Library.

Augustus A. Gould, Benjamin A. Gould, Jr.,
J. P. Cooke, Jr.

Auditing Committee.

Charles Jackson, Jr. Thomas T. Bouvé.

Four hundred and sixteenth meeting.

August 8, 1855. — Quarterly Meeting.

The President in the chair.

The Recording Secretary read a communication addressed to him by J. J. Dixwell, Esq., requesting in behalf of Dartmouth College that the Publications of the Academy be presented to that Institution.

On motion of Dr. A. A. Gould, seconded by Professor Asa Gray, it was voted, that, in accordance with the request of Mr.